translocations, and would obviously increase the cost and duration of the project. Nonetheless, the knowledge obtained from such studies would permit a more informed evaluation of the consequences of translocations than would be possible otherwise. Such knowledge will be critical to the development of effective conservation management plans for this highly endangered species throughout its distribution.

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References


RETHINKING THE STATUS OF CALLITHRIX FLAVICEPS

First described at the turn of the century, the buffy-headed marmoset, Callithrix flaviceps, remained in almost total obscurity until the 1980's, by which time it was already listed as endangered. It was only at the beginning of that decade, in fact, that this endemic brazilian primate was found to occur in the state of Minas Gerais (Mittermeier er al., 1980), having been previously restricted to the neighbouring state of Espírito Santo (Hershkovitz, 1977). Despite this discovery, the natural range of C.flaviceps is one of the smallest of the platyrrhines and has, like the rest of Brazil's Atlantic forest, suffered extensive deforestation and habitat fragmentation (Mittermeier er al., 1982).

Initial estimates of the numbers of C.flaviceps remaining in the wild were far from encouraging, although the species is now known to survive in nine municipalities of Espírito Santo and Minas Gerais (Ferrari and Mendes, 1991; Mendes in press), with at least five populations occurring in officially protected areas. In addition to these reserves, privately-owned forest remnants may be fundamentally important for the species survival over the long term (Ferrari and Mendes, 1991).

During a recent study supported by the Brazil Science Council (CNPq) and the Brazil Program of Conservation International, Washington, D.C., sixteen of these remnants, varying in size between 14 and 216 ha, were surveyed in eastern Minas Gerais (see Diego et al., in press). The presence of C.flaviceps was either reported by local residents and/or confirmed by direct observation at 10 of these sites, including the smallest. From these results, we have estimated that at least three hundred forest fragments within the known range of C.flaviceps probably support marmoset populations of some kind. Assuming an arbitrary minimum of value of 10 individuals per site, the total C.flaviceps population would be at least 3,000. Both these estimates are highly conservative, however, and a more realistic, but nonetheless cautious figure would exceed 10,000. In theory, a population this size would probably be viable over the long term (see MacKinnon et al., 1986), although in practice its fragmentation into a large number of relatively small, isolated subpopulations is a major potential problem. In the short term, at least, this marmoset's survival is favoured by two factors: its ability to inhabit marginal and disturbed habitats (Ferrari and Mendes, 1991), and the positive attitude of most local landowners towards the preservation of remaining forest (Diego et al., in press). Its small size also minimises hunting pressure.

At the present time, then, a captive breeding program would not appear to be a priority for the conservation of C.flaviceps, although the reserve network will need to be enlarged and consolidated, and a carefully planned programme of translocations will almost certainly be necessary to avoid inbreeding depression and related problems (Konstant and Mittermeier, 1982; see also Karen Strier's considerations on page 1). One problem resulting from habitat fragmentation at some sites, for example, is the loss of taxon integrity. Ferrari and Mendes (1991) and Mendes (in press) have reported hybridisation of C.flaviceps with
Callithrix geoffroyi at a number of locations in Espirito Santo, and with Callithrix aurita in Minas Gerais (see Coimbra-Filho et al., 1993).

In addition to the management of wild populations, then, an effective conservation programme will ultimately depend on the definition of the taxonomic status of the flaviceps form (Templeton, 1986). In contrast with its original classification, flaviceps has in recent years been identified as a subspecies of both Callithrix jacchus (v. Hershkovitz, 1977) and C.aurita (v.Coimbra-Filho, 1990). The most recent and comprehensive review of marmoset taxonomy, that of de Vivo (1991), nevertheless argues for its status as a full species. None of these viewpoints can yet be considered definitive, however, without more conclusive evidence, in particular from morphological, ecological, behavioural, and genetic variables.

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References


PRIMATE TAG OF THE AUSTRALASIAN SPECIES MANAGEMENT PLAN

The Australasian Regional Primate Taxon Advisory Group, started in 1989 for zoos in Australia and New Zealand, operates under the auspices of the Australasian Species Management Program (ASMP) of the Australasian Regional Association of Zoological Parks and Aquaria (ARAZPA). The objectives include coordination amongst zoos to determine the priority species for captive breeding. The TAGs are divided into two groups: those for species which naturally occur in Australia and New Zealand, and those for species which do not. The Primate TAG falls into the latter category and currently counts on eight institutions as active members, with an additional six zoos participating in species management programs. The Primate TAG hopes to focus its conservation efforts on species from South-east Asia - species currently held include orang-utan, white-checked gibbon, silvery gibbon, white-handed gibbon, siamang, Celebes macaque, pig-tailed macaque, Javan black langur, and slow loris. Several collaborative programs have also been